

CLAIMS

We claim:

- 1 1. A massage device, comprising:
 - 2 a handle;
 - 3 a head pivotably coupled to the handle, the head having at least one chamber and at least one massage head adapted to contact a skin surface of a user;
 - 5 at least one impeller positioned in the at least one chamber and capable of rotating relative to the head;
 - 7 at least one fluid conduit having at least one outlet positioned proximate to the impeller for contacting a fluid with the at least one impeller, wherein the fluid causes the impeller to rotate; and
 - 10 at least one oscillation device disposed in the head and coupled to the impeller for moving the head in an oscillatory motion relative to the handle, wherein the at least one oscillation device is substantially shielded from contact by the fluid emitted from the at least one fluid conduit.

- 1 2. The massage device of claim 1, wherein the at least one oscillation device comprises at least one gear positioned in the at least one chamber.

1 3. The massage device of claim 2, wherein the at least one gear is positioned in a
2 plane that is generally orthogonal to a longitudinal axis of the massage device.

1 4. The massage device of claim 2, wherein the at least one gear is positioned in a
2 plane that is generally parallel to a longitudinal axis of the massage device.

1 5. The massage device of claim 2, wherein the at least one oscillation device
2 comprises at least one weight coupled to the at least one gear, whereby the at least one
3 weight comprises a center of mass that is capable of moving relative to at least one gear.

1 6. The massage device of claim 5, wherein the at least one weight comprises at
2 least one cavity, the at least one cavity including at least one insert positioned in the cavity,
3 and the insert coupled to the at least one gear at a point offset from an axis of rotation of the
4 at least one gear.

1 7. The massage device of claim 2, further comprising at least one stop on the at
2 least one gear for limiting the rotation of at least one weight.

1 8. The massage device of claim 2, wherein the at least one gear comprises a first
2 gear and a second gear in communication with the at least one impeller through at least one
3 center gear positioned between the first and second gears.

1 9. The massage device of claim 8, wherein the first and second gears each
2 include at least one weight having a center of mass and the center of mass of the first gear is
3 movable relative to the first gear.

1 10. The massage device of claim 9, further comprising at least one stop element
2 extending from the first gear for limiting movement of the at least one weight.

1 11. The massage device of claim 8, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned a first distance from an axis of rotation of the
3 first gear in a first position, and the center of mass of the at least one weight attached to the
4 first gear is positioned at a second distance from an axis of rotation of the first gear in a
5 second position, whereby the first and second distances are not equal.

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2 12. The massage device of claim 9, wherein the center of mass of the at least one
3 weight attached to the first gear is positioned between about 185 degrees and about 200
4 degrees out-of-phase with the at least one weight attached to the second gear.

1 13. The massage device of claim 9, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned in-phase with the at least one weight attached to
3 the second gear.

1 14. The massage device of claim 9, wherein the at least one weight of the first gear

2 is attached to the first gear so that the at least one weight moves relative to the first gear

3 while the at least one weight of the second gear remains substantially motionless relative to

4 the second gear.

1 15. The massage device of claim 1, wherein the at least one oscillation device

2 comprises at least one body rotatably about a shaft, the body including a slot for receiving a

3 first cam and having at least one massage head coupled thereto, and the first cam positioned

4 in the slot and mechanically coupled to the at least one impeller.

1 16. The massage device of claim 15, further comprising a second cam pivotably

2 coupled to the first cam for changing the action of the body depending on the direction of

3 rotation of the at least one impeller.

1 17. The massage device of claim 15, wherein the second cam is positioned relative

2 to the first cam to change between a large oscillation pattern and a small oscillation pattern.

1 18. The massage device of claim 1, wherein the at least one conduit comprises at

2 least one end capable of being releasably attached to a fitting.

1 19. The massage device of claim 1, further comprising at least one valve coupled
2 to the at least one conduit for controlling fluid flowing through the at least one conduit and
3 striking the at least one impeller.

1 20. The massage device of claim 19, wherein the at least one valve is adjustable
2 between an off mode, an open mode allowing fluid to flow through a first outlet, and an open
3 mode allowing fluid to flow through a second outlet, and further comprising at least one
4 conduit coupled to the first outlet and having at least one end positioned proximate to the at
5 least one impeller to expel a fluid to rotate the impeller in a first direction and comprising at
6 least one conduit coupled to the second outlet and having at least one end positioned
7 proximate to the at least one impeller to expel a fluid to rotate the impeller in a second
8 direction that is generally opposite to the first direction.

1 21. The massage device of claim 20, wherein the at least one impeller comprises a
2 first portion having a first diameter and a second portion having a second diameter that is
3 greater than the first diameter, and wherein the at least one end of the at least one conduit
4 coupled to the first outlet is positioned to expel a fluid from the end to rotate the at least one
5 impeller in the first direction, and the at least one end of the at least one conduit coupled to
6 the second outlet is positioned to expel a fluid from the end to rotate the at least one impeller
7 in the second direction.

1 22. The massage device of claim 1, further comprising at least one rotation
2 limiting device for limiting a range of rotation of the head relative to the handle.

1 23. The massage device of claim 22, wherein the at least one rotation limiting
2 device comprises at least one spring positioned between the handle and the head.

1 24. The massage device of claim 1, further comprising at least one additive
2 emitting chamber for mixing a fluid with an additive contained in the at least one additive
3 emitting chamber.

1 25. The massage device of claim 24, further comprising at least one valve coupled
2 to at least one conduit for directing fluid into the at least one additive emitting chamber;
3 wherein fluid flow through the valve is adjustable along a continuum between a completely
4 open mode and a completely closed mode.

1 26. The massage device of claim 1, further comprising at least one orifice in the at
2 least one chamber for releasing a fluid from the head to contact a user.

1 27. The massage device of claim 1, wherein the head comprises at least one first
2 chamber containing the at least one impeller and at least one second chamber containing the
3 at least one oscillation device.

1 28. The massage device of claim 27, wherein the at least one oscillation device is
2 positioned in the second chamber, and further comprising a fluid barrier isolating the at least
3 one oscillation device from the at least one chamber and wherein the fluid barrier
4 substantially prevents the fluid from contacting the at least one oscillation device.

1 29. The massage device of claim 27, further comprising at least one drain
2 positioned in the at least one first chamber for draining fluids.

1 30. The massage device of claim 27, further comprising at least one drain
2 positioned in the at least one second chamber for draining fluids.

1 31. A massage device, comprising:
2 a handle;
3 a head pivotably coupled to the handle, the head having at least one chamber and at
4 least one massage head adapted to contact a skin surface of a user;
5 at least one water driven drive means for rotating at least one oscillation means; and
6 the least one oscillation means for moving the head in an oscillatory motion relative
7 to the handle and for imparting an oscillatory force to the at least one massage head for
8 contacting a user, wherein the at least one oscillation means is disposed in the head and is
9 substantially shielded from contact by a fluid emitted to drive the at least one water driven
10 drive means.

1 32. The massage device of claim 31, wherein the at least one oscillation means
2 comprises at least one gear positioned in the at least one chamber.

1 33. The massage device of claim 32, wherein the at least one gear is positioned in
2 a plane that is generally orthogonal to a longitudinal axis of the massage device.

1 34. The massage device of claim 32, wherein the at least one gear is positioned in
2 a plane that is generally parallel to a longitudinal axis of the massage device.

1 35. The massage device of claim 32, wherein the at least one oscillation means
2 comprises at least one weight coupled to the at least one gear, whereby the at least one
3 weight comprises a center of mass that is capable of moving relative to at least one gear.

1 36. The massage device of claim 35, wherein the at least one weight comprises at
2 least one cavity, the at least one cavity including at least one insert positioned in the cavity,
3 and the insert coupled to the at least one gear at a point offset from an axis of rotation of the
4 at least one gear.

1 37. The massage device of claim 32, further comprising at least one stop on the at
2 least one gear for limiting the rotation of the at least one weight.

1 38. The massage device of claim 32, wherein the at least one gear comprises a first
2 gear and a second gear in communication with the at least one water driven drive means
3 through at least one center gear positioned between the first and second gears.

1 39. The massage device of claim 38, wherein the first and second gears each
2 include at least one weight having a center of mass and the center of mass of the first gear is
3 movable relative to the first gear.

1 40. The massage device of claim 39, further comprising at least one stop element
2 extending from the first gear for limiting movement of the at least one weight.

1 41. The massage device of claim 38, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned a first distance from an axis of rotation of the
3 first gear in a first position, and the center of mass of the at least one weight attached to the
4 first gear is positioned at a second distance from an axis of rotation of the first gear in a
5 second position, whereby the first and second distances are not equal.

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2 42. The massage device of claim 39, wherein the center of mass of the at least one
3 weight attached to the first gear is positioned between about 185 degrees and about 200
4 degrees out-of-phase with the at least one weight attached to the second gear.

1 43. The massage device of claim 39, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned in-phase with the at least one weight attached to
3 the second gear.

1 44. The massage device of claim 39, wherein the at least one weight of the first
2 gear is attached to the first gear so that the at least one weight moves relative to the first gear
3 while the at least one weight of the second gear remains substantially motionless relative to
4 the second gear.

1 45. The massage device of claim 31, wherein the at least one oscillation device
2 comprises at least one body rotatably about a shaft, the body including a slot for receiving a
3 first cam and having at least one massage head coupled thereto, and the first cam positioned
4 in the slot and mechanically coupled to the at least one water driven drive means.

1 46. The massage device of claim 45, further comprising a second cam pivotably
2 coupled to the first cam for changing the action of the body depending on the direction of
3 rotation of the at least one water driven drive means.

1 47. The massage device of claim 45, wherein the second cam is positioned relative
2 to the first cam to change between a large oscillation pattern and a small oscillation pattern.

1 48. The massage device of claim 31, wherein the at least one water driven drive

2 means is at least one impeller.

1 49. The massage device of claim 48, further comprising at least one valve coupled

2 to at least one conduit for controlling fluid flowing through the at least one conduit and

3 striking the at least one impeller.

1 50. The massage device of claim 49, wherein the at least one valve is adjustable

2 between an off mode, an open mode allowing fluid to flow through a first outlet, and an open

3 mode allowing fluid to flow through a second outlet, and further comprising at least one

4 conduit coupled to the first outlet and having at least one end positioned proximate to the at

5 least one impeller to expel a fluid to rotate the impeller in a first direction and comprising at

6 least one conduit coupled to the second outlet and having at least one end positioned

7 proximate to the at least one impeller to expel a fluid to rotate the impeller in a second

8 direction that is generally opposite to the first direction.

1 51. The massage device of claim 50, wherein the at least one impeller comprises a

2 first portion having a first diameter and a second portion having a second diameter that is

3 greater than the first diameter, and wherein the at least one end of the at least one conduit

4 coupled to the first outlet is positioned to expel a fluid from the end to rotate the at least one

5 impeller in the first direction, and the at least one end of the at least one conduit coupled to

6 the second outlet is positioned to expel a fluid from the end to rotate the at least one impeller
7 in the second direction.

1 52. The massage device of claim 31, further comprising at least one additive
2 emitting means for mixing a fluid with an additive.

1 53. The massage device of claim 52, further comprising at least one valve coupled
2 to at least one conduit for directing fluid into the at least one additive emitting means;
3 wherein fluid flow through the valve is adjustable along a continuum between a completely
4 open mode and a completely closed mode.

1 54. The massage device of claim 31, further comprising at least one orifice in the
2 at least one chamber for releasing a fluid from the head to contact a user.

1 55. The massage device of claim 31, wherein the head comprises at least one first
2 chamber containing the at least one water driven drive means and at least one second
3 chamber containing the at least one oscillation means.

1 56. The massage device of claim 55, wherein the at least one oscillation means is
2 positioned in the second chamber, and further comprising a fluid barrier isolating the at least

3 one oscillation device from the at least one chamber and wherein the fluid barrier
4 substantially prevents the fluid from contacting the at least one oscillation device.

1 57. The massage device of claim 55, further comprising at least one drain
2 positioned in the at least one first chamber for draining fluids.

1 58. The massage device of claim 55, further comprising at least one drain
2 positioned in the at least one second chamber for draining fluids.

1 59. The massage device of claim 55, wherein the head is pivotably coupled to the
2 handle.

1 60. The massage device of claim 59, further comprising at least one rotation
2 limiting device for limiting a range of rotation of the head relative to the handle.

1 61. The massage device of claim 60, wherein the at least one rotation limiting
2 device comprises at least one spring positioned between the handle and the head.

1 62. A method of generating a massaging action, comprising:
2 passing a fluid into a massage device to contact at least one impeller, wherein the
3 massage device includes a head pivotably coupled to the handle, the head having at least one
4 chamber and at least one massage head adapted to contact a skin surface of a user;

5 rotating the at least one impeller positioned in the head, which in turn rotates at least
6 one oscillation device disposed in the head and coupled to the impeller for moving the head
7 in an oscillatory motion relative to the handle, wherein the at least one oscillation device is
8 substantially shielded from contact by the fluid emitted from the at least one fluid conduit;

9 oscillating the head and the at least one massage head coupled to the head relative to
10 the handle;

11 contacting the at least one oscillating massage head with a skin surface of a user;

12 exhausting at least a portion of the fluid from the massage device proximate to the at
13 least one massage head; and

14 enabling the fluid exhausted from the massage device to contact the skin surface of
15 the user.

1 63. The method of claim 62, wherein passing a fluid into a massage device to
2 contact one or more impellers further comprises receiving the flowing fluid from a shower

3 head fitting in a shower.

1 64. The method of claim 62, wherein the fluid exhausted from the massage device
2 is greater than about 75 degrees Fahrenheit.